8 emulate a first body in a three-dimensional virtual world by changing one or more
9 attributes of a first cursor, wherein the first cursor comprises a first plurality of
10 nodes configured as a first point hierarchy;

11

12 move the first cursor within the virtual world based on the first set of data;

13

14 modify a virtual three-dimensional work piece based on the motion of the first
15 cursor within the virtual world;

16

17 update a database to reflect the changes to the virtual three-dimensional work
18 piece; and

19

20 cause the database to be rendered into one or more images from one or more
21 different viewpoints; [and]

22

23 cause the one or more images to be displayed on the one or more display devices;
24 and

25 construct virtual objects within the virtual world using a second point hierarchy
26 and a data flow network for controlling the motion of nodes of the virtual
27 objects by:

28 attaching each virtual object node hierarchically with at least one other
29 virtual object node to form the second point hierarchy, wherein each of the
30 virtual object nodes has a position and an orientation, and

31 building the data flow network as an interconnection of input units,
32 function units, and output units, wherein said input units receive data from
33 sensors and output the received data to at least one of said function units,
34 wherein each of said function units includes at least one input and at least one
35 output, each function unit generating a value for the at least one output based
36 on at least one of data received from at least one of the input units and data
37 received from an output of at least one other of said function units, and